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Army Service Forces
Quartermaster Corps
CLIMATIC RESEARCH LABORATORY
Lawrence, Massachusetts

SECURITY OFFICER

Monthly Report - 1 March 1945

1. The following report was sent to the Office of The Quartermaster General for the approval of General Georges F. Doriot:

Report No. 161 - 22 February 1945

Jacket, Field, Pile, Modified

Comfort, Fit, Utility and Thermal Insulation as Determined by
Laboratory and Field Studies.

Five Tables and Two Figures

Five experimental pile jackets were compared with the standard jacket in the laboratory and in the field. The experimental jackets embodied comprehensive changes in design, fabric composition and front closure from those of the standard jacket. Particular attention was given to the thermal insulation, fit, comfort and utility of each item. The ambient temperature in the Cold Room was plus 30°F. during determination of thermal insulation at rest. Strenuous and light exercise was pursued in the field at temperatures ranging from plus 7°F. to plus 30°F.

At the conclusion of the trials it was apparent that several of the modifications incorporated in the experimental jackets had great merit. The changes in design across the shoulders were outstanding. The Albert Twill lining in the sleeve was an effective means of reducing creeping but had a tendency to cause localized bunching of the fabric. A combination of alpaca and wool pile for the sleeves in place of standard alpaca-mohair led to more creeping than the sleeves lined with twill but was an improvement over the unlined sleeves. The zipper front opening was preferred to the button through fly opening which in turn was preferred to the button through loop opening. The modification incorporated did not alter thermal insulation sufficiently to be detected.

A supplementary phase of the study was an investigation into the design of an experimental field jacket, M-1943, to be worn with or without the pile jacket. The experimental jacket when worn with the pile jacket was superior to the standard M-1943 jacket in comfort, fit, freedom of movement and appearance as an outer garment.

It was recommended that the desirable features of the standard and experimental pile jackets and field jacket, respectively, be incorporated in new models to be designed and subsequently considered for acceptability.

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R E S T R I C T E D

2. Provisional Report, 6-8 February 1945, embodied a comprehensive progress report of the Canvas, Tropical, Proving, as pursued at Homestead, Florida. There are two test sites under study at present. One is in the sun, the other in the shade. A third and fourth site are proposed to include beach exposure and marl soil. The several projects are as follows:

- Tents, Parkas, Shelter Halves and Ponchos
- Panels of Mildew Resistant Fabrics
- Tent Pins
- Mildew Resistant Thread
- Canvas, Water, Sterilizing Bag
- Volatile Mould Inhibitors
- Folding Cots
- Storage Dumps
- Compound, Mildew Proofing

Many of the items are sampled periodically and dispatched for analysis by the Tropical Deterioration Laboratory at Philadelphia. Professor Weber of the University of Florida inspects the sites from time to time as consultant in mycology.

3. The Wet Cold Field Trials at Fort Preble, Maine are approximately fifty percent completed. Up to the middle of February the temperature was generally in the subfreezing range. During the past fortnight the temperature usually has been above freezing during the day and as cold as zero at night. Each of the four teams with test officers and observers are continuously in the field for two and three week problems. Captain Clinton as Test Officer in Charge, supported by a competent professional staff, is collecting a mass of valuable information on the standard and experimental items under test as well as general information regarding controlled field testing.

4. In the Provisional Reports during the month, tests on the following items were discussed:

- Trousers, Padded, Sateen
- Shoe, Arctic, Felt, with Cuff
- Pad, Insulated, Sleeping
- Drier, Clothes, Portable, Indirect
- Fuel, Solid, Ration Heating, Hexamine
- Jungle Uniforms
- Sock, Felt, 56-oz.
- Underwear
- Thermistors and Associated Circuits
- Shoepac, Rubber, Experimental

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